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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,749	08/25/2003	Sam Idicula	50277-2237	3748

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EXAMINER
COLAN, GIOVANNA B

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/648,749	IDICULA ET AL.
	Examiner	Art Unit
	Giovanna Colan	2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 August 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _25 August 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _10/15/2004_, 05\16\ 2005, 01\21\2005, 12/05/2003

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is issued in response to applicant filed application on 08/25/2003.

2.   Claims 1 – 34 are pending.

3.   The information disclosure statement (IDS) submitted on 05/16/2005,

01/21/2005, 10/15/2004, and 12/05/2003. The submission is in compliance with the

provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the examiner.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claim 1 – 4, 6, 9, 12 – 21, 23, 26, and 29 – 34 are rejected under 35

U.S.C. 102(e) as being anticipated by Fox et al. (Fox hereinafter) (US Patent Pub. App.

No. 2003/0120665 A1, filed: March 22, 2002).

Regarding Claim 1, Fox discloses a method of evolving an Extensible Markup

Language (XML) Schema (Page 3, [0061], lines 1 – 4, Fox), the method comprising:

receiving, at a schema evolver that is executing in a computer system, a

document that indicates one or more changes to be made to a first XML schema (Fig. 4,

Page 3 and 4, [0061] and [0071], lines 1 – 4 and 1 – 5, receiving a schema, the schema

including at least one primary data structure; respectively, Fox[1]);

based on said first XML schema and said document, said schema evolver

generating a second XML schema (Page 4, [0072], lines 24 – 27, Fox); and

based on said second XML schema, generating one or more first Structured

Query Language (SQL) statements (Page 6, [0128], lines 1 – 3, Fox).

Regarding Claim 2, Fox discloses a method, wherein said first SQL statements,

when executed, cause one or more database object types to be created (Page 48,

[0455], lines 6 – 9, Fox).

Regarding Claim 3, Fox discloses a method, wherein said first SQL statements,

when executed, cause one or more database object tables to be created (Page 16,

[0253], lines 1 – 4, Fox).

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[1] Examiner interprets the schema transformation generator (taught in Fox's disclosure, Page 4, [0072],
lines 1 – 3, Fox) as the schema evolver.

Regarding Claim 4, Fox discloses a method, wherein said first SQL statements, when executed, cause one or more database object types to be deleted (Page 56, [0502], lines 7 – 10, deletion, Fox[2]).

Regarding Claim 6, Fox discloses a method, wherein said first SQL statements, when executed, cause one or more database object types to be altered (Page 56, [0502] and [0504], lines 9 – 10 and 1 – 2, object y is changed; respectively, Fox).

Regarding Claim 9, Fox discloses a method, wherein said one or more changes are expressed as one or more instances of one or more XML types specified by a third XML schema (Fig. 11A, Page 11, [0200], lines 1 – 5, Fox[3]).

Regarding Claim 12, Fox discloses a method of generating Structured Query Language (SQL) statements to alter database types in a database system that has definition data that defines a set of one or more database object types, the method comprising:

receiving a first Extensible Markup Language (XML) schema (Fig. 4, Page 3, [0061], lines 1 – 4, receiving a schema, Fox); and

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[2] Wherein deletion of an object implies deletion of an object type.
[3] Fox's disclosure teaches transformations from one schema to the other (Fig. 11A, Page 11, [0200], lines 1 – 5, Fox), and includes different schemas, including a third schema (Fig. 4, Data Schema #3, Fox). Examiner interprets that if the changes are expressed in a first and/ or second schema, then the changes will also be expressed in a third schema.

based on said first XML schema, generating one or more SQL statements that, when executed, cause a database server to alter said set of one or more database object types (Page 59, [0529], lines 8 – 11, Fox).

Regarding Claim 13, Fox discloses a method, wherein said one or more database object types were generated based on a second XML schema that differs from said first XML schema (Page 48, [0453], lines 8 – 11, Fox[4]).

Regarding Claim 14, Fox discloses a method, wherein said first XML schema was generated based on said second XML schema (Page 56, [0502], lines 9 – 10, Fox[5]).

Regarding Claim 15, Fox discloses a method, wherein said one or more SQL statements, when executed, cause said database server to create one or more of said one or more database object types (Page 48, [0455], lines 6 – 9, Fox).

Regarding Claim 16, Fox discloses a method, wherein said one or more SQL statements, when executed, cause said database server to delete one or more of said one or more database object types (Page 56, [0502], lines 7 – 10, deletion, Fox[6]).

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[4] Wherein target is the second XML schema, and data type VARCHAR2 is the database object type.
[5] Examiner interprets the objects as the XML schemas.
[6] Wherein deletion of an object implies deletion of an object type.

Regarding Claim 17, Fox discloses a method of generating Structured Query

Language (SQL) statements to alter database object instances, the method comprising:

receiving a first Extensible Markup Language (XML) schema (Fig. 4, Page 3,

[0061], lines 1 – 4, receiving a schema, Fox); and

based on said first XML schema, generating one or more SQL statements that,

when executed, cause a database server to alter a set of one or more database object

instances (Page 59, [0529], lines 8 – 11, Fox).

Regarding Claim 18, Fox discloses a computer-readable medium carrying one or

more sequences of instructions which, when executed by one or more processors,

causes the one or more processors to perform the method recited in claim 1 (see Fox's

citation included in claim 1 above, and Page 47, [0449], lines 4 – 7, Fox).

Regarding Claim 19, Fox discloses a computer-readable medium carrying one or

more sequences of instructions which, when executed by one or more processors,

causes the one or more processors to perform the method recited in claim 2 (Page 48,

[0455], lines 6 – 9, Fox).

Regarding Claim 20, Fox discloses a computer-readable medium carrying one or

more sequences of instructions which, when executed by one or more processors,

causes the one or more processors to perform the method recited in claim 3 (Page 16,

[0253], lines 1 – 4, Fox).

Regarding Claim 21, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 4 (Page 56, [0502], lines 7 – 10, deletion, Fox[7]).

Regarding Claim 23, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 6 (Page 56, [0502] and [0504], lines 9 – 10 and 1 – 2, object y is changed; respectively, Fox).

Regarding Claim 26, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 9 (Page 5, [0086], lines 1 – 4, Fox[8]).

Regarding Claim 29, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 12 (see citation included in claim 12 above).

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[7] Wherein deletion of an object implies deletion of an object type.

[8] Fox's disclosure teaches transformations from one schema to the other (Page 5, [0086], lines 1 – 4, Fox), and includes different schemas, including a third schema (Fig. 4, Data Schema #3, Fox). Examiner

Regarding Claim 30, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 13 (Page 48, [0453], lines 8 – 11, Fox[9]).

Regarding Claim 31, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 14 (Page 56, [0502], lines 9 – 10, Fox[10]).

Regarding Claim 32, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 15 (Page 48, [0455], lines 6 – 9, Fox).

Regarding Claim 33, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors,

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interprets that if the changes are expressed in a first and/ or second schema, then the changes will also be expressed in a third schema.

[9] Wherein target is the second XML schema, and data type VARCHAR2 is the database object type.

[10] Examiner interprets the objects as the XML schemas.

causes the one or more processors to perform the method recited in claim 16 (Page 56, [0502], lines 7 – 10, deletion, Fox[11]).

Regarding Claim 34, Fox discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 17 (see citation included in claim 17 above).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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[11] Wherein deletion of an object implies deletion of an object type.

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

8.   Claim 5, 7 – 8, 22, and 24 – 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fox et al. (Fox hereinafter) (US Patent Pub. App. No. 2003/0120665

A1, filed: March 22, 2002) in view of Chau et al. (Chau hereinafter) (US Patent No.

6,636,845 B2, filed: January 31, 2002).

       Regarding Claim 5, Fox discloses all the limitations as disclosed above including

SQL tables related to XML schema information. However, Fox is silent about deleting

tables. On the other hand, Chau discloses a system and method for generating XML

documents including deleting database tables (Page 27, lines 36 – 38, Chau). It would

have been obvious to one of ordinary skill in the art at the time the invention was made

to incorporate Chau's teachings to Fox's system. Skilled artisan would have been

motivated to do so, as suggested by Chau (Col. 2, lines 54 – 57, Chau), in order to

decompose an XML document and store the decomposed data into a relational

database.

       Regarding Claim 7, the combination of Fox in view of Chau discloses a method,

wherein said first SQL statements, when executed, cause one or more database object

tables to be altered (Fig. 4, item 410, Col. 34, lines 40 – 42, Chau).

Regarding Claim 8, the combination of Fox in view of Chau discloses a method, wherein said first SQL statements, when executed, cause one or more database object instances to be altered (Fig. 4, item 406, Col. 34, lines 33 – 37, Chau[12]).

Regarding Claim 22, the combination of Fox in view of Chau discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 5 (see citation included in claim 5 above).

Regarding Claim 24, the combination of Fox in view of Chau discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 7 (Fig. 4, item 410, Col. 34, lines 40 – 42, Chau).

Regarding Claim 25, the combination of Fox in view of Chau discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 8 (Fig. 4, item 406, Col. 34, lines 33 – 37, Chau[13]).

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[12] Examiner interprets column as a database object instance.
[13] Examiner interprets column as a database object instance.

9.   Claim 10 – 11, and 27 – 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fox et al. (Fox hereinafter) (US Patent Pub. App. No. 2003/0120665

A1, filed: March 22, 2002) in view of Vaitzblit (Vaitzblit hereinafter) (USPatent

Application Pub. No. 2002/0007363 A1, filed: May 21, 2001).

        Regarding Claim 10, Fox discloses all the limitations as disclosed above

including SQL statements. However, Fox is silent about reversing SQL statements. On

the other hand, Vaitzblit discloses a system and method for generating SQL statements

that cause other SQL statements to be reversed (Page 4, [0036], lines 13 – 19,

Vaitzblit). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate Vaitzblit's teachings to the Fox's system. Skilled

artisan would have been motivated to do so, as suggested by Vaitzblit (Page 1, [0007],

lines 13 – 16, Vaitzblit), to provide store and roll forward methods that allow recovery of

fine-grained objects, such as an individual row within table. In addition, Vaitzblit's

teachings belongs to the same field of SQL and database management systems.

        Regarding Claim 11, the combination of Fox in view of Vaitzblit discloses a

method, further comprising:

        determining, while executing said one or more first SQL statements, whether an

error has occurred (Page 2, [0020], lines 3 – 4 and 10 – 11, Vaitzblit); and

        in response to determining that an error has occurred, executing one or more of

said one or more second SQL statements that, when executed, cause effects of said

one or more first SQL statements that have been executed to be reversed (Page 2 and 4, [0021] and [0036], lines 9 – 10 and 13 – 19; respectively, Vaitzblit).

Regarding Claim 27, the combination of Fox in view of Vaitzblit discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 10 (see citation included in claim 10 above).

Regarding Claim 28, the combination of Fox in view of Vaitzblit discloses a computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claim 11 (see citation included in claim 11 above).

Prior Art Made Of Record

1.   Fox et al. (US Patent Pub. App. No. 2003/0120665 A1, filed: March 22, 2002)

discloses arun-time architecture for enterprise integration with transformation

generation.

2.   Chau et al. (US Patent No. 6,636,845 B2, filed: January 31, 2002) discloses

generating one or more XML documents from a single SQL query.

3.   Vaitzblit (USPatent Application Pub. No. 2002/0007363 A1, filed: May 21, 2001)

discloses a system and method for transaction-selective rollback reconstruction of
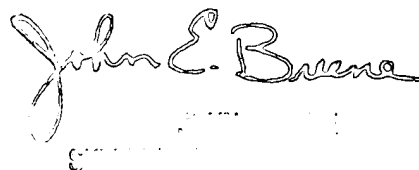
database objects.

Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Giovanna Colan
Examiner
Art Unit 2162
February 23, 2006